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|-----------|--------|------------------|------------|
| 3,231,726 | 1/1966 | Williamson | 244/3.2 X |
| 3,272,972 | 9/1966 | Yamron | 235/150.25 |
| 3,374,966 | 3/1968 | Howard | 244/3.2 |

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A self-contained, strapped down guidance system combining all axes, all attitude navigation having two wide angle, two-degree-of-freedom gyros which provide attitude angle and angular rate signals along three axes. Accelerometer means provide signals representative of the acceleration along three orthogonally displaced independent axes. A first transformation matrix connected to the attitude angle output of the gyros and to the accelerometers transforms the gyro and accelerometer signals from body coordinates to gyro coordinates. A second transformation matrix connected to the output of the gyros, transforms the gyro coordinates into navigation coordinates. In order to perform navigational computations, computing means compute a transformation from gyro momentum vector (referenced to coordinate frame) to a navigational coordinate frame such as a locally vertical frame wherein the Z axis is always along the local vertical direction.

8 Claims, 5 Drawing Figures

